

Proposal for amendment to Regulation No. 13 (Heavy vehicle braking)

I. Proposal

Paragraph 5.2.1.32, amend to read:

"5.2.1.32. Subject to the provisions of paragraph 12.4. to this Regulation, all vehicles in categories M2, M3, N2 and N3 ~~12/~~ having no more than 3 axles, shall be equipped with a vehicle stability function. This shall include roll-over control and directional control and meet the technical requirements of Annex 21 to this Regulation.

The following vehicles shall be excluded from the requirement to be equipped with a vehicle stability function:

- a. **Vehicles of category G;**
- b. **Special purpose vehicles;**
- c. **Mobile machinery (a power-driven vehicle which is specifically designed and constructed to perform work and which, because of its construction characteristics, is not suitable for transporting goods or carrying passengers other than equipment and fluids, or operators/crew, necessary for its operation);**
- d. **Hydro-static driven vehicles in which the hydraulic drive system is also used for braking and auxiliary functions;**
- e. **N2 vehicles**
 - **with a gross vehicle mass between 3.5 and 7.5 tonnes, a non-standard low-frame chassis, more than 2 axles and hydraulic transmission, or**
 - **N2 tractors for semi-trailer with a gross vehicle mass (GVM) between 3.5 and 7.5 tonnes;**
- f. **Class I and Class A buses of categories M2 and M3, articulated buses and coaches;**
- g. **Special purpose vehicles converted from vehicles which in their original state have already a braking system type approval not requiring being equipped with EVSC.**

~~12/ Off-road vehicles, special purpose vehicles (e.g. mobile plant using non-standard vehicle chassis, mobile cranes, hydro-static driven vehicles in which the hydraulic drive system is also used for braking and auxiliary functions, N2 vehicles which have all of the following features: a gross vehicle mass between 3.5 and 7.5 tonnes, a non-standard low frame chassis, more than 2 axles and hydraulic transmission), Class I and Class A buses of categories M2 and M3, articulated buses and coaches, N2 tractors for semi-trailer with a gross vehicle mass (GVM) between 3.5 and 7.5 tonnes, shall be excluded from this requirement.~~







II. Justification

Footnote 12 in Regulation N°13 has in practice led to several discussions between the vehicle manufacturers and the authorities. In many practical cases, the correct interpretation of this footnote is unclear, i.e. the question remained whether a vehicle submitted for type approval is exempted or not from the requirement to be equipped with a vehicle stability function.

For this reason, this proposal aims at clarifying the current list of exemptions set up in current footnote 12. Except for the new item g (converted vehicles), this proposal is just a clarification of the current footnote 12 and does not change the content of the requirements.

1. **Vehicles of category G:** this wording aims at replacing the current wording “off-road vehicles”. It is indeed already defined in the RE.3 (document TRANS/WP.29/78/Rev.1 as last amended, paragraph 7 of Annex 7) as “*vehicles of categories M and N satisfying the requirements of this paragraph*” where the requirements are e.g. all-wheel-drive or vehicles with at least 50% of the axles are driven axles, one differential locking mechanism, climbing capabilities, approach, departure and ramp angles, etc. The consequence of such change is an improvement of the clarity of the possible exemptions, in addition to a more consistent approach as there is now a reference to a definition currently existing in the UNECE framework.
2. **Special purpose vehicles:** no change to the current wording.
3. **Mobile machinery:** this wording covers mobile plants, mobile cranes, etc. by proposing a more generic term derived from the definition of mobile machinery in paragraph 16 of article 3 in the Framework Directive (Directive 2007/46/EC).
4. **Hydro-static driven vehicles :** no change to the current wording
5. **N2 vehicles** with some clear conditions:
 - **with a gross vehicle mass between 3.5 and 7.5 tonnes, a non-standard low-frame chassis, more than 2 axles and hydraulic transmission:** per Supplement 5 to the 11 Series of Amendments (document WP29/2010/64) - no change to the current wording.
 - **N2 tractors for semi-trailer with a gross vehicle mass (GVM) between 3.5 and 7.5 tonnes:** no change to the current wording
6. **Class I and Class A buses of categories M2 and M3, articulated buses and coaches:** no change to the current wording
7. **Special purpose vehicles converted from vehicles which in their original state have already a braking system type approval not requiring being equipped with EVSC:** additional item in the list of exemptions. It happens for example that vehicles are originally type-approved with all-wheel drive, and then are subsequently fitted with additional non-driven axle(s) or axle(s) with hydraulic drive. At the time of type-approval, the vehicle lost its “G-status” and the manufacturer cannot guarantee that the vehicle will comply with the EVSC requirements.

The table below shows examples experienced by some HCV manufacturer:

| Type | wheelbase (basic) current prod. | wheelbase (new) converted | Problem | ESP (mand.) |
|---------|---|--|---|---------------------------------|
| 70S/80S | 18.D20/D26 4x4 BL  | 25.D20/D26 6x4/4 BLL  | exp. loss of exemption due to loss of "G"-state* | 07/2013 (ECE) 11/2014 (G SR) |
| 73S/90S | 35.D20/D26 8x4H-6 BL  | 26.D20/D26 6x4H BL  | exp. loss of exemption due to 4-axle veh., no dataset available | 07/2013 (ECE) 11/2014 (G SR) |
| 52S/80S | 18.D20/D26 4x4 BB 18.D20/D26 4x4 BL  | 25.D20/D26 6x4/4 BLB 25.D20/D26 6x4/4 BLL  | exp. loss of exemption due to loss of "G"-state* | 07/2013 (ECE) 11/2014 (G SR) |

* "AWD"-EVSC (veh. with transfer case) not available

In some cases the production volume is such low that EVSC would be much too expensive, in other cases the EVSC application simply does not exist.